

REMARKS

Reconsideration of the subject application as amended herein is respectfully requested.

The subject application pertains to digital discs having at least one data layer with data arranged so that the data can be read when the discs are rotated in only one of two directions. Several aspects of this invention are described and claimed herein.

One aspect pertains to a double sided disc with data written along spirals wound in opposite directions on the two sides. The result of this arrangement is that, while data can be read from either side of the disc while the disc is rotated in a single direction, the required direction of rotation is dependent on the orientation of the disc. If one side of the disc is on top, the disc needs to be rotated in one direction. If another side of the disc is on top, the disc needs to be rotated in the opposite direction. There are two solutions proposed in the present invention to solve this problem. One solution is to rotate the disc in default direction and to attempt to read some data from the disc. If data is read successfully, then the disc is being rotated in the proper direction, otherwise it is not. The present application further describes, and the claims further cover, two approaches for this aspect. In one aspect, if no data can be read from the disc, then the direction of rotation of the disc is reversed. In another aspect of the invention, if no data can be read from the disc, instructions are provided to a user to either reverse the rotation of the disc (using a switch provided for this purpose), or alternatively, to reverse the rotation of the disc automatically.

Another aspect of the invention deals with the kind of data used to identify the correct rotation of the disc. In the previous aspect, discussed above, standard data is read from a standard portion of a disc to determine its direction of rotation. In an alternate embodiment of the invention, rotation specific data is placed on the disc. This data may be in the form of a bar code, a BCA type encoding signal, etc. Alternatively, the data could be an analog wave form shaped to provide rotation indication.

Yet another aspect of the invention is that a player is provided that can play even a standard disc of the kind that presently needs to be removed and reversed because existing players can play one side at a time. According to this invention, a player is provided with two heads, one for reading each side. Then to read one side, the disc is rotated in a first direction. To read the other side, the disc is rotated in the other direction.

These aspects of the invention are described at pages 25-28 of the specification, as well as in Figures 4-6.

It is respectfully submitted that none of these aspects are disclosed in the cited references and accordingly, the corresponding claims are patentably distinguishable over these references. More particularly, the Ishibashi recognizes the need for determining the proper direction of rotation for a disc. However, in this reference, a controller looks for specific addresses on the data layers and determines the order in which data is to be read based on these addresses. The reference fails to appreciate the two alternates described and claimed herein, namely, rotating the disc in a default direction, attempting to read data and if no data is detected, then generating a signal. In response to this signal, the disc can be reversed automatically or manually. The reference

further fails to disclose the other solution, namely providing on the disc bar codes, BCA type encoding, or other similar rotation specific data. The reference only discusses the address information.

Finally, the Ishibashi reference only discloses reading data from discs having data written in opposite spirals on the two sides. Ishibashi completely fails to recognize that a player with two heads can be used to read a standard disc as well by reversing the rotation of its motor.

The Examiner also took the position that the original claims were anticipated by O'Hara. However, O'Hara only discloses a disc on which data is written radially inward on one side and radially outward on the other side. The problems of reading data in spirals is completely ignored by O'Hara, and therefore this reference has no bearing to the present invention.

The Examiner's reliance on O'Hara regarding claim 12 is completely misplaced. The cited passage (col. 7, line 63 to col. 8 line 2, lines 42-69) all pertain to configuring the data layer so that data must be read either radially inwardly or radially outwardly. However, the direction of rotation for reading the discs has nothing to do with these considerations.

The remaining references (Ito, Yamauchi) are relied on for teaching a disc with multiple layers on one side or to a player with laser heads on both sides. However, neither of these references address any of the problems and offer the solutions discussed above and recited in the claims presented herein.

It is respectfully submitted that the subject application is patentably distinguishable over the prior art and therefore it should be allowed.

Respectfully submitted,

GOTTLIEB RACKMAN & REISMAN PC

Attorneys for Applicant

270 Madison Avenue

New York, New York 10016-0601

Telephone: (212) 684 3900

Facsimile: (212) 684 3999

By: 

Tiberia Weisz, Esq.

Reg. No. 29,876

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